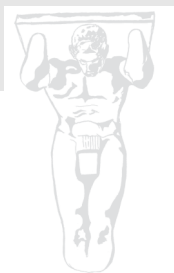


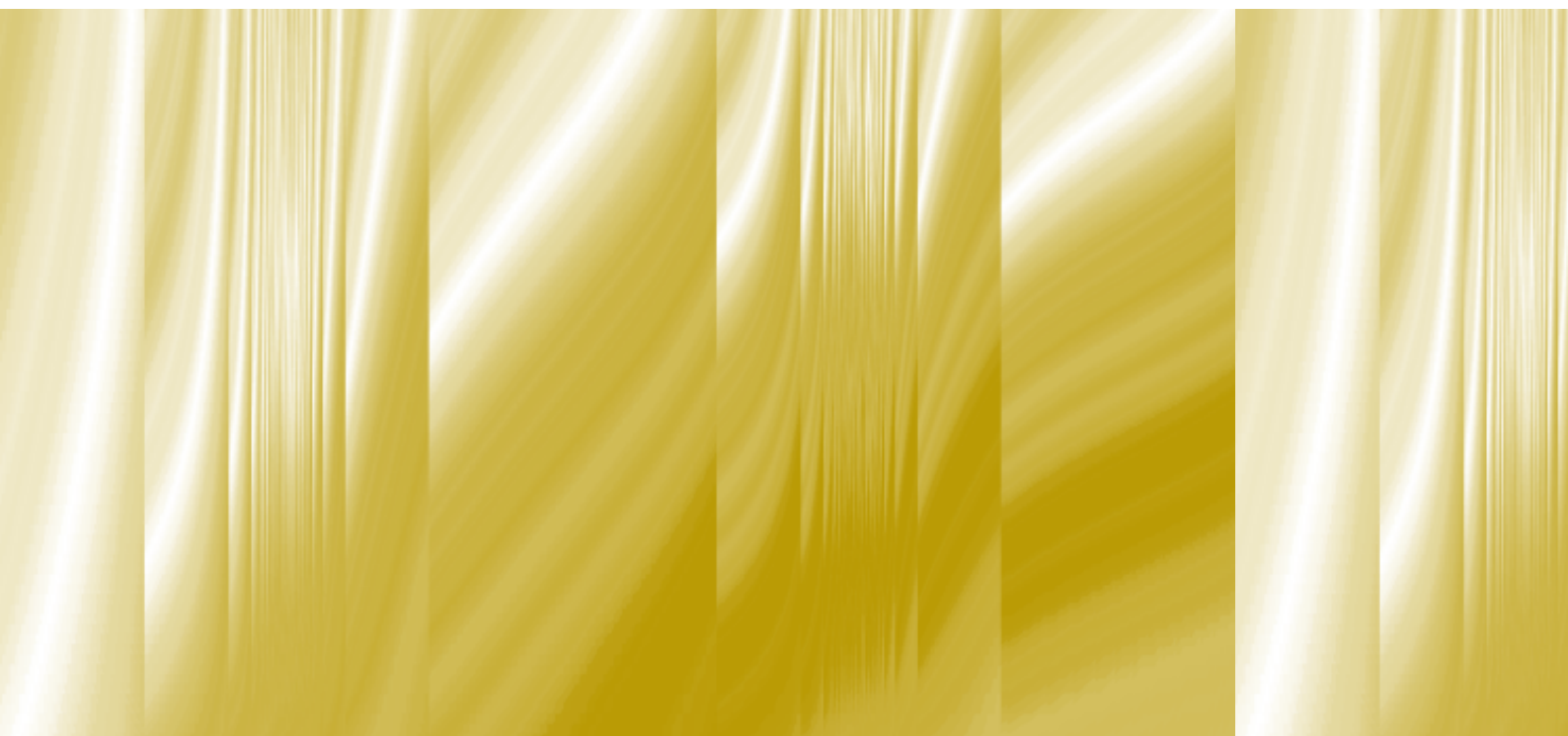
**BANKA
SLOVENIJE**

**BANK OF SLOVENIA
EUROSYSTEM**



BANK OF SLOVENIA STAFF ANALYSIS

**ANALYSIS OF THE IMPACT
OF COVID-19 MEASURES ON
CARD AND CASH OPERATIONS**



JUNE 2020

INTRODUCTION

The sharp decline in economic indicators caused by the Covid-19 epidemic and the extensive containment measures have also been reflected in the functioning of payment systems and the supply of cash to the market. Banka Slovenije has therefore conducted analysis of the impact of the Covid-19 epidemic on patterns of payments and cash use. The analysis covers the period of 1 February to 31 May, and focuses on the amount of cash net issuance (i.e. the amount of cash issued into circulation minus the amount of cash returned from circulation), cash withdrawals at ATMs, and card payments.

Similarly to other European countries, when the epidemic was declared in Slovenia demand for cash was seen to rise dramatically, particularly for the purpose of cash as a store of value. The largest increase in demand for cash (in the sense of net issuance) was seen immediately after the epidemic was declared, when people rushed to the shops to buy essentials before the lockdown began. Many people also built up reserves of cash at this time.

The average value of ATM withdrawals increased significantly during the lockdown, while the frequency of withdrawals declined considerably. People opted to make fewer visits to ATMs, but compensated by making larger withdrawals of cash. The average weekly total value of withdrawals at ATMs nevertheless declined. Banka Slovenije's assessment is that people were largely being supplied with more cash at bank counters.

During the epidemic Banka Slovenije worked with the commercial banks to ensure the undisrupted supply of cash, and access to cash was maintained at more than 1,500 of the commercial banks' ATMs. The ATM network remained almost fully operational during the epidemic (cash could be withdrawn at more than 95% of all ATMs). The exceptions were usually ATMs on the premises of closed buildings, which customers were unable to access for that reason.

The epidemic was also reflected in patterns of **card payments**. Until 13 March, there were an average of roughly 650,000 card transactions per day, with a total value of approximately EUR 20 million. By the end of the epidemic, average daily volume had fallen to roughly 474,000 transactions with a total value of approximately EUR 17 million, having been significantly lower in the days after the pandemic was declared.

Similarly to cash transactions, the analysis of card transactions revealed that people stockpiled in the days just before the lockdown, most notably food and hygiene products. Shopping became less frequent after the lockdown was declared, but average values therefore increased. The average value of an individual transaction in the period before lockdown was EUR 31, but the figure had risen to EUR 35 by the end of the epidemic. There was a significant increase in online shopping during the lockdown.

Since the lockdown ended, card transactions have been gradually returning to their pre-epidemic state. The same is true of cash transactions, where the amount of cash returned from circulation and the use of banknotes for transaction purposes are gradually increasing, although they are yet to reach their pre-crisis levels. Some of the figures for transactions at ATMs are also gradually approaching their pre-crisis levels, but this cannot be said of cash net issuance, which remains above its usual level.

Banka Slovenije also helped to ensure the smooth functioning of cash and payment systems by taking appropriate preventive measures to avoid any disruption to private payment systems and the related infrastructure, and to ensure the smooth supply of cash to the market.

CASH OPERATIONS

The cash distribution system in Slovenia encompasses Banka Slovenije, the commercial banks, CIT companies, retailers and households. Banka Slovenije is the focal point of the cash distribution system, where cash is issued, stored and processed for the needs of maintaining an adequate quality of cash in circulation for the entire country. The commercial banks supply cash to end users (retailers and households) via bank counters (banknotes and coins) and ATMs. Retailers then return their daily cash takings to the commercial banks and Banka Slovenije, where the cash is processed (checked for authenticity and fitness for further circulation). Cash not of the requisite quality is destroyed.

From the perspective of ensuring the adequate availability of and access to cash for end users (households), during the official epidemic period it was therefore particularly crucial to ensure the smooth functioning of all the aforementioned stakeholders in the cash cycle, which ensured that ATMs (as the primary channel) and selected bank branches were able to operate.

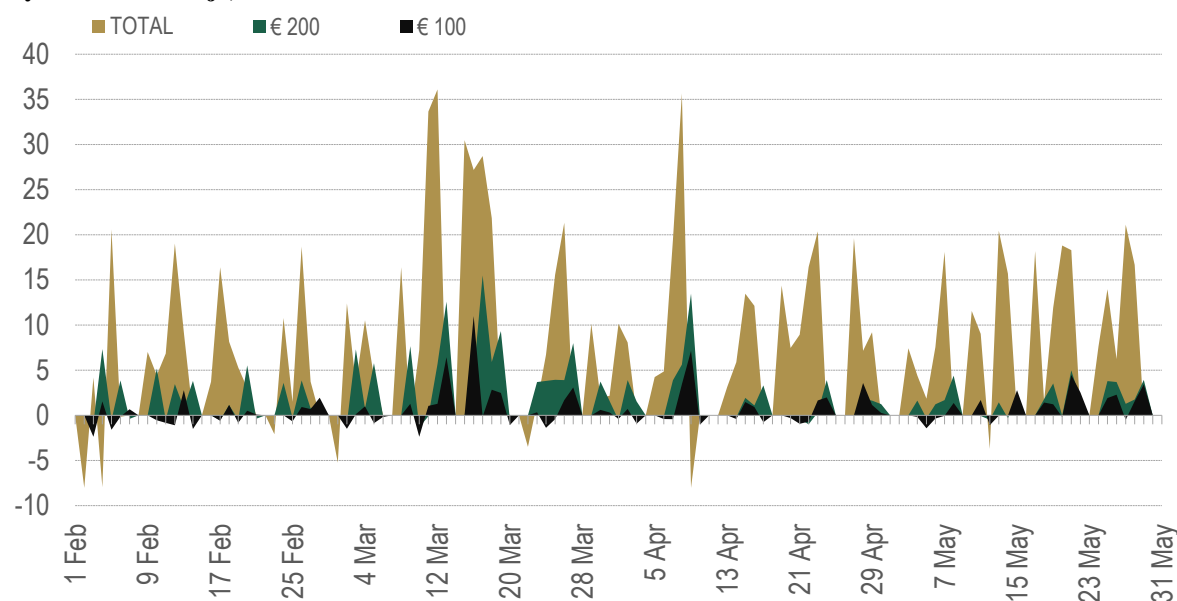
Access to cash as a means of payment is of key importance to the functioning of the economy, and not only during a crisis. In many European countries, Slovenia included, cash is still the most commonly used means of payment for goods and services (particularly for smaller amounts). For certain population groups, such as the elderly, the blind and partially sighted, low-income individuals, and people with no access to electronic forms of payment, cash is a vital means of payment.

The experience of past economic crises, and other uncertainties of local or broader dimensions, teaches that demand for cash usually increases significantly during crisis situations. There are two reasons for this. The first and most common reason for people to respond in this way is precautionary behaviour: in the fear of being unable to purchase essential goods and services, or simply because of a loss of confidence, people decide to build up a certain level of cash reserves (cash as a store of value). The second, less common reason seen in the past is outages in electronic forms of payment. In this instance demand for cash increases solely on the practical grounds of making actual purchases of goods and services. By its very nature, cash in circulation can be used for at least two different purposes: **(1) as a store of value, and (2) for transaction purposes.**

Similarly to other European countries, when the epidemic was declared in Slovenia demand for cash was seen to rise dramatically, particularly for the purpose of cash as a store of value. The largest increase in demand for cash (in the sense of net issuance) was seen immediately after the epidemic was declared, when people rushed to the shops to buy essentials before the lockdown began. Many people also built up reserves of cash at this time.

Between 12 and 25 March 2020 (the first two weeks of lockdown), daily cash net issuance averaged **EUR 13.14 million** (EUR 183.97 million on aggregate; see Figure 1). This is the second-highest daily increase in cash net issuance after the collapse of Lehman Brothers in the first half of October 2008 saw daily net cash issuance reach **EUR 16.60 million**. Daily cash net issuance averaged **EUR 4.12 million** over the whole of 2019. Even over a longer period (April and May of this year), it can be seen that cash net issuance remained at an elevated level (daily cash net issuance averaged **EUR 8.31 million** between 12 March and 31 May 2020; EUR 673.03 million on aggregate), and therefore there was no evident trend of decline in cash net issuance to its pre-crisis level.

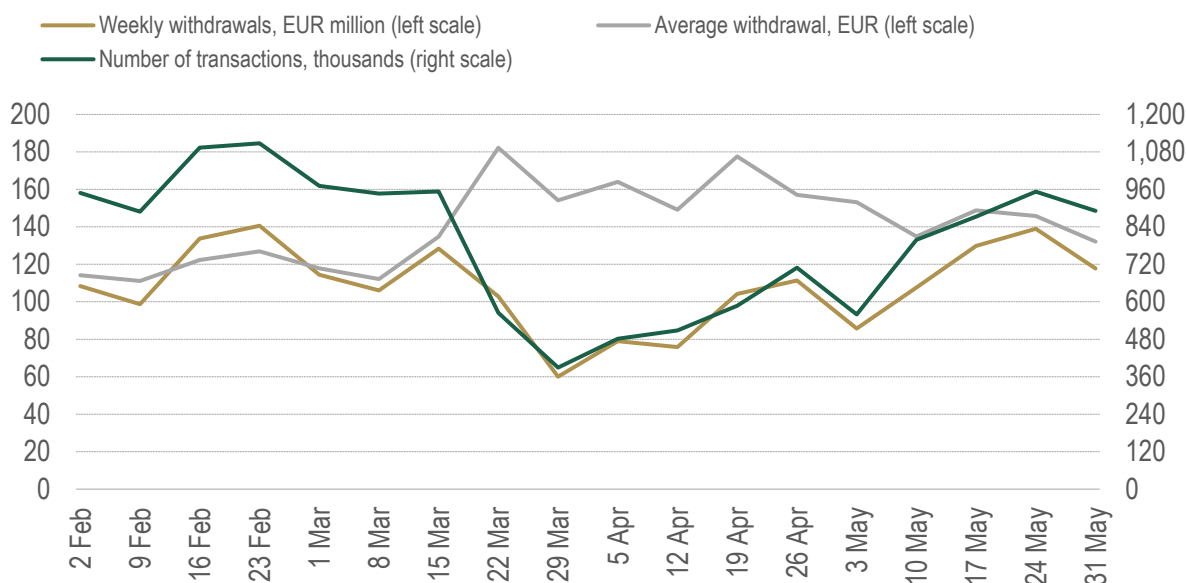
Figure 1: Total cash net issuance and net issuance of €200 and €100 banknotes by Banka Slovenije, EUR million



Sources: Banka Slovenije, own calculations

Analysis of transactions at ATMs reveals an increase in the average value of an individual withdrawal from EUR 117.41 before the epidemic to EUR 152.78 in the weeks from 9 March until the end of the epidemic. There was a particularly sharp increase in average value of an individual withdrawal at ATMs in the first days after the epidemic was declared, which can be attributed to preventive and precautionary action by people at the outbreak of the pandemic. By contrast, the number of transactions at ATMs fell significantly during this period, as people made fewer visits to ATMs, withdrawing larger amounts when they did so. Average weekly value of withdrawals at ATMs also fell, from EUR 117 million before the epidemic to EUR 103.4 million in the weeks from 9 March until the end of the epidemic (see Figure 2). These figures for transactions at ATMs have been gradually approaching their pre-crisis levels, particularly in the second half of May, i.e. after the announcement had been made that the epidemic would be officially declared over at the end of the month.

In light of the above, it can be concluded that people modified their payment habits (in the sense of cash use) to a certain extent during the epidemic, and that there were fewer cash payments at points of sale than before the outbreak of the crisis. Given the renewed gradual increase in cash transactions at points of sale and the gradual return of larger quantities of cash from circulation (which has not yet reached its pre-crisis levels), no conclusion can be drawn yet as to whether the public's payment habits have really been changed by the coronavirus crisis, or were merely adapted temporarily to the given situation.

Figure 2: Total weekly withdrawals, average individual withdrawal, and weekly number of cash withdrawals at ATMs

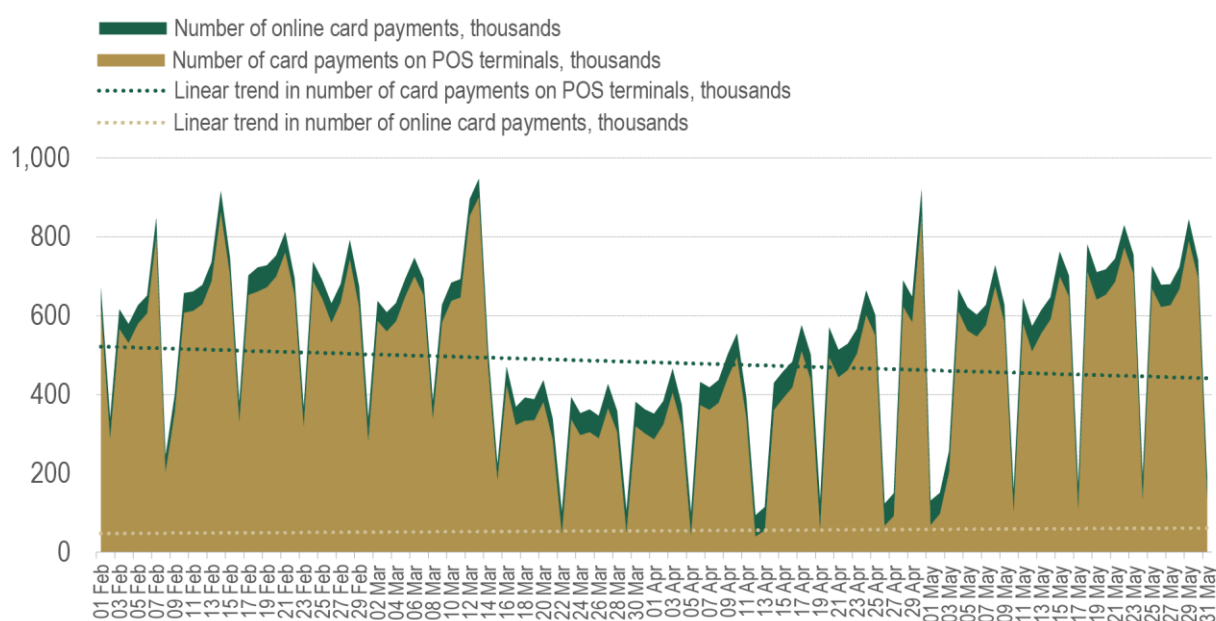
Sources: Bankart d.o.o., Mercury Processing Services International d.o.o., own calculations

During the epidemic there was speculation in the media about the safety of cash payments because of the possibility of coronavirus being transmitted via banknotes and coins. As confirmed by preliminary analysis, and by a post by ECB Executive Board member Fabio Panetta published on the [ECB blog](#) on 28 April 2020, Banka Slovenije would like to reassure all consumers that cash is a reliable and safe payment instrument even in crisis situations. Analysis conducted by the ECB in conjunction with top European laboratories established that the use of euro banknotes does not entail any great risk of the transmission of novel coronavirus. The results indicate that coronaviruses can survive more easily on a stainless steel surface (e.g. door handles) than on cotton euro banknotes, with survival rates approximately 10 to 100 times higher in the first few hours after contamination. Other analysis indicates that it is much more difficult for coronavirus to be transferred from porous cotton surfaces (such as banknotes) than from smooth surfaces (like plastic) that people come into contact with every day. Similar conclusions about the chances of transmission of coronavirus via cash during the pandemic were reached by the Robert Koch Institute in Germany. Irrespective of the above, to protect against the transmission of coronavirus when using cash to purchase goods and services, it is still sensible to take account of the preventive recommendations issued by various institutions, such as regular washing and sanitising of hands.

CARD OPERATIONS

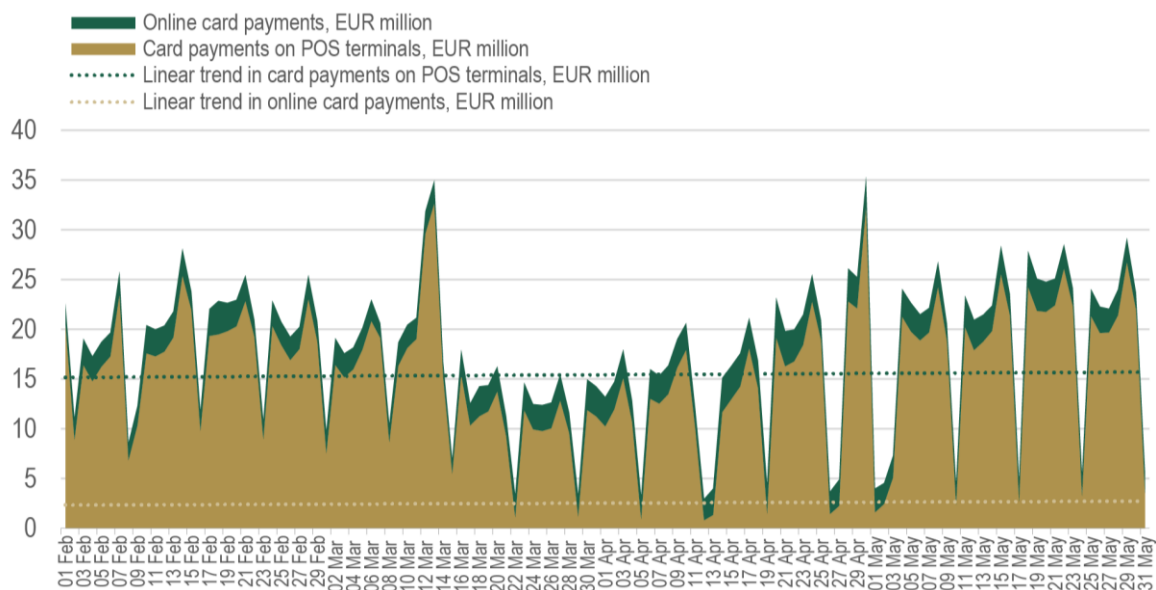
The coronavirus epidemic in Slovenia between 12 March and 31 May of this year, and all the containment measures, in particular the restrictions on people's movements, were also clearly reflected in patterns of card payments. The turning point came on 13 March. It can be seen nicely in Figures 3a and 3b, which illustrate the number and value of card transactions executed with cards of Slovenian issuers between 1 February and 31 May 2020. Until 13 March, there were an average of roughly 650,000 card transactions per day, with a total value of approximately EUR 20 million. By the end of the epidemic, average daily volume had fallen to roughly 474,000 transactions with a total value of approximately EUR 17 million, having been significantly lower in the days after the pandemic was declared.

Figure 3a: Number of card transactions, physical points of sale and online (nominal)



Sources: Bankart d.o.o., Mercury Processing Services International d.o.o., own calculations

Figure 3b: Value of card transactions, physical points of sale and online (nominal)



Sources: Bankart d.o.o., Mercury Processing Services International d.o.o., own calculations

The two figures clearly show that the total number and value of daily card transactions first rose sharply on 12 and 13 March, before falling significantly after 14 March. The declaration of the epidemic and the anticipation of the lockdown prompted people to stockpile in the days just before the lockdown, most notably food and hygiene products. After 13 March, during the lockdown, shopping became less frequent, there were fewer opportunities to make purchases in bricks-and-mortar outlets, and non-food shops were closed, which meant that average values increased. The average value of an individual transaction in the period before lockdown¹ was EUR 31, but the figure had risen to EUR 35 by the end of the epidemic.

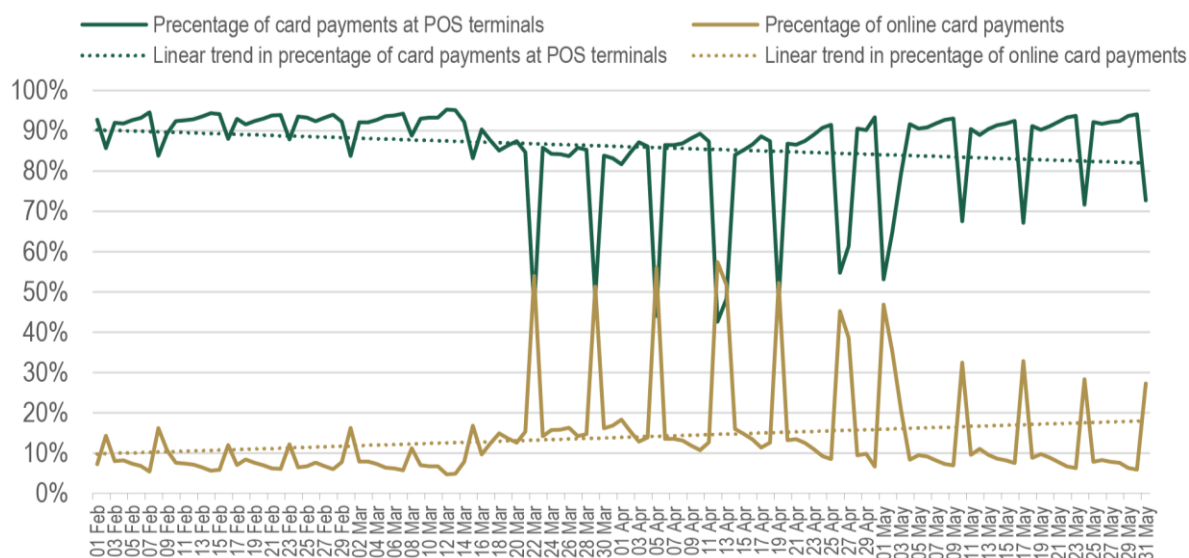
¹ The calculation was made on the basis of data for the period of 1 February to 13 March 2020.

It is also evident from Figures 3a and 3b that in late April and early May when the easing of measures related to the epidemic was announced (late April) and then the measures were gradually eased (May), the number and value of card transactions increased evenly, which is indicative of the return of card operations to the volume seen before the epidemic. The uptick in the last three days of April, when the number and value of transactions jumped sharply, was attributable to the upcoming holiday, when people made more purchases because bricks-and-mortar shops would be closed for several days.

In addition to a change in the number and value of card payments, the epidemic period also saw a change in the ratio of card payments at physical points of sale to card payments for online purchases. Here too it is thought to be the result of the lockdown measures and the closure of certain bricks-and-mortar shops.

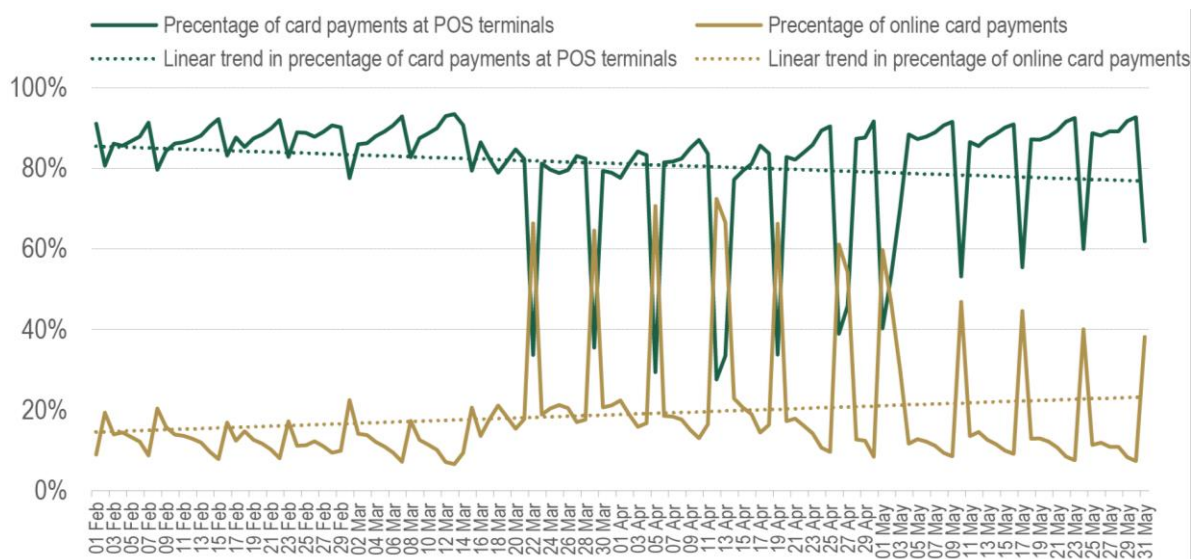
Figures 4a and 4b illustrate the breakdown of the number and value of card transactions executed with cards of Slovenian issuers between 1 February and 31 March 2020 into transactions at physical points of sale and online transactions. After 13 May and before the initial easing of the containment measures in May, there was a significant increase in the proportion of purchases made online. This rose from 7% before the lockdown to 12% by the end of the epidemic as measured by the number of transactions executed with cards of Slovenian issuers, and from 12% to 16% as measured by the value. The large daily spikes in the proportion of online transactions, which exceeded 50% on certain days, were related to shops being closed (including food shops) on Sundays and public holidays. It is evident from the two figures that the ratio of card payments at physical points of sale to card payments for online purchases is gradually returning to its level before the epidemic was declared.

Figure 4a: Breakdown of number of card transactions, physical points of sale and online



Sources: Bankart d.o.o., Mercury Processing Services International d.o.o., own calculations

Figure 4b: Breakdown of value of card transactions, physical points of sale and online



Sources: Bankart d.o.o., Mercury Processing Services International d.o.o., own calculations

It was not only the measures put in place when the epidemic was declared and the lockdown was imposed that affected people's payment habits. Banka Slovenije's assessment is that another factor in the change in payment habits was the fact that coronavirus can be transmitted via contaminated surfaces, including touching the keys on POS terminals. For this reason Banka Slovenije supported the use of the maximum

permissible exemption under EU legislation,² at least during the pandemic, which allows (but does not order) payment service providers to enable contactless payments for individual card transactions of up to EUR 50 (EUR 25 in Slovenia) without any need to enter a PIN, taking account of the relevant legal restrictions.³ Raising the limit to EUR 50 for an individual card transaction could significantly help to limit exposure to a potential source of contagion, given the reduced frequency of PIN entry (which requires POS terminal keypads to be handled). Raising the limit for an individual contactless card transaction was supported and encouraged at EU level by both the EBA and the European Commission with the aim of preventing the spread of coronavirus, and payment service providers in the majority of Member States did indeed raise the limit.⁴ Payment service providers in Slovenia were unable to reach a consensus on this matter.

² Article 11 of Commission Delegated Regulation (EU) 2018/389 with regard to regulatory technical standards for strong customer authentication and common and secure open standards of communication (RTS).

³ Articles 11(2) and 11(3):

- the cumulative amount of previous contactless electronic payment transactions initiated by means of a payment instrument with a contactless functionality from the date of the last application of strong customer authentication does not exceed EUR 150; or
- the number of consecutive contactless electronic payment transactions initiated via the payment instrument offering a contactless functionality since the last application of strong customer authentication does not exceed five.

⁴ According to data available in 23 EU Member States.